

COMPUTER PROGRAM PRODUCT FOR QUANTITATIVE ANALYSIS OF A  
NUCLEIC ACID AMPLIFICATION REACTION

ABSTRACT OF THE DISCLOSURE

5 A computer program product for determining a threshold value  
(e.g., a threshold cycle number or time value) in a nucleic  
acid amplification reaction tangibly embodies instructions  
readable by a machine to perform the steps of deriving a  
growth curve from measurements of a signal whose intensity  
10 is related to a quantity of nucleic acid sequence being  
amplified in the reaction, calculating a derivative of the  
growth curve, identifying a characteristic of the  
derivative, and determining a threshold value associated  
with the characteristic of the derivative. The method  
15 provides for highly reproducible threshold values that are  
independent of noise or background signal in the  
amplification reaction. Embodiments of a computer program  
product for determining a starting quantity of a nucleic  
acid sequence in a test sample are also provided.

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